



### PERFORMANCE RANGE

- Maximum flow rate **160 l/min** (9.6 m<sup>3</sup>/h)
- Maximum head **23 m**

### APPLICATION LIMITS

- Manometric suction lift up to **7 m**
- Liquid temperature between **-10 °C** and **+90 °C**
- Ambient temperature between **-10 °C** and **+40 °C**
- Max. working pressure **4 bar**
- Continuous service **S1**

### CONSTRUCTION AND SAFETY STANDARDS

EN 60034-1  
IEC 60034-1  
CEI 2-3



REGULATION (EU) N. 547/2012

### CERTIFICATIONS



AI30



### INSTALLATION AND USE

Suitable for use with clean water and liquids that are not chemically aggressive towards the materials from which the pump is made. As a result of their construction characteristics, these centrifugal pumps are suitable for use in the domestic, agricultural and industrial sectors. All of the components in contact with the pumped liquid are constructed from stainless steel AISI 304, thus guaranteeing complete hygiene and maximum resistance against corrosion. The pump should be installed in an enclosed environment, or at least sheltered from inclement weather.

### OPTIONALS AVAILABLE ON REQUEST

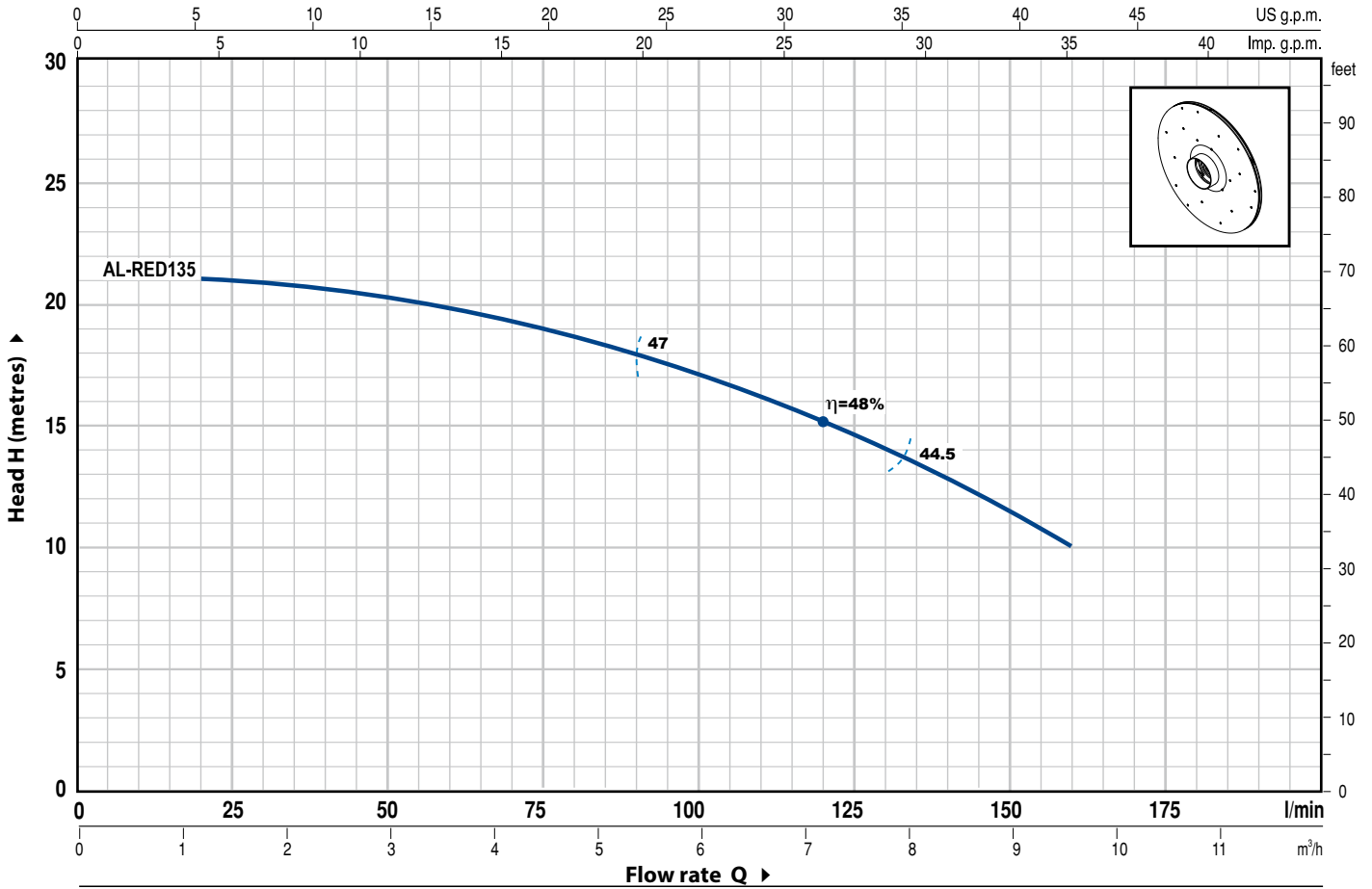
- Special mechanical seal
- EN 10088-3 - 1.4401 (AISI 316) stainless steel motor shaft
- Other voltages or 60 Hz frequency

### GUARANTEE

1 year subject to terms and conditions

**CHARACTERISTIC CURVES AND PERFORMANCE DATA**

**50 Hz n= 2900 1/min HS= 0 m**

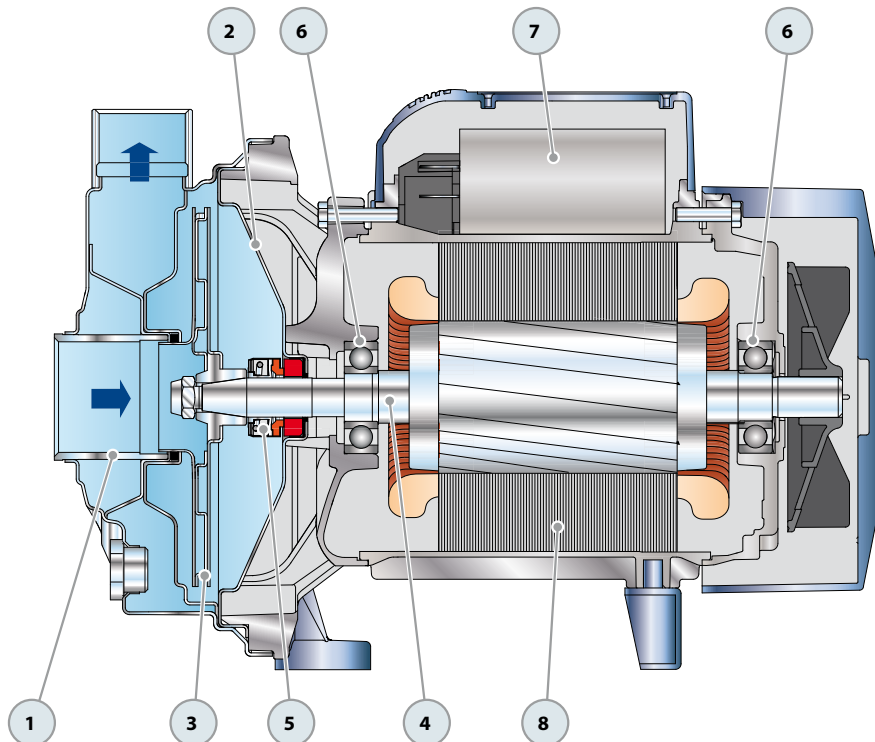


MODEL		POWER		Q										
Single-phase	Three-phase	kW	HP		m³/h	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6
AL-RED 135m	AL-RED 135	0.75	1	l/min	0	20	40	60	80	100	120	140	160	
				H metres	23	21	20.5	20	18.5	17	15	13	10	

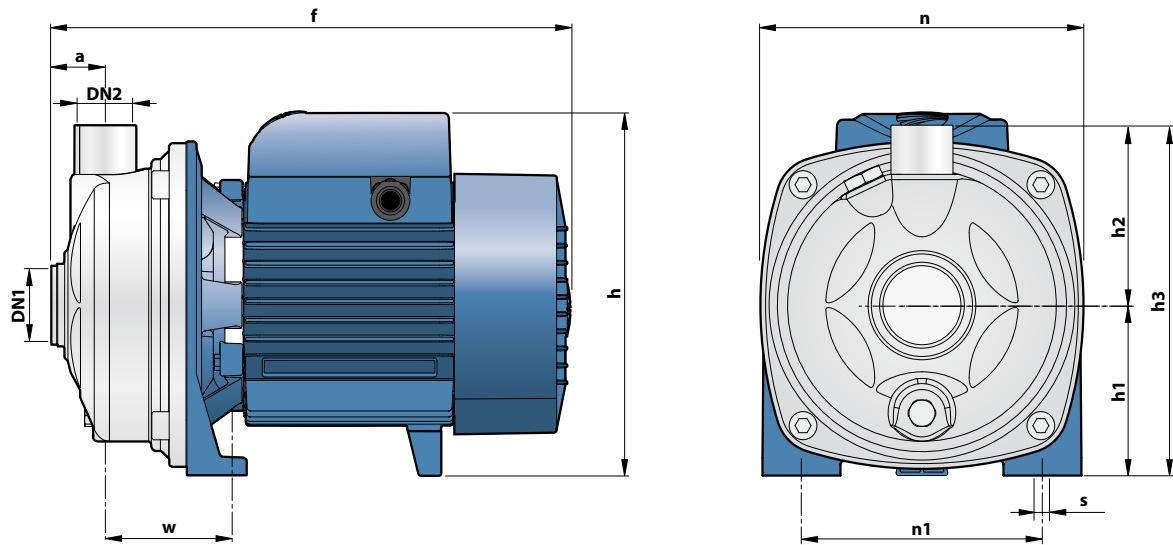
Q = Flow rate H = Total manometric head HS = Suction height

Tolerance of characteristic curves in compliance with EN ISO 9906 Grade 3.

POS.	COMPONENT	CONSTRUCTION CHARACTERISTICS				
1	PUMP BODY	Stainless steel AISI 304, complete with threaded ports in compliance with ISO 228/1				
2	BODY BACKPLATE	Stainless steel AISI 304				
3	IMPELLER	Stainless steel AISI 304				
4	MOTOR SHAFT	Stainless steel EN 10088-3 - 1.4104				
5	MECHANICAL SEAL	<i>Seal</i>	<i>Shaft</i>	<i>Materials</i>		
		<i>Model</i>	<i>Diameter</i>	<i>Stationary ring</i>	<i>Rotational ring</i>	<i>Elastomer</i>
		AR-14	Ø 14 mm	Ceramic	Graphite	NBR
6	BEARINGS	6203 ZZ / 6203 ZZ				
7	CAPACITOR	<i>Capacitance</i>				
		<i>(230 V or 240 V)</i>	<i>(110 V)</i>			
		20 µF 450 VL	60 µF 300 VL			
8	ELECTRIC MOTOR	<b>AL-RED 135m:</b> single-phase 230 V - 50 Hz with thermal overload protector built-in to the winding. <b>AL-RED 135:</b> three-phase 230/400 V - 50 Hz. <b>⇒ Pump fitted with the three-phase motor option offers IE2 (IEC 60034-30) class high performance</b> – Insulation: F class. – Protection: IP X4.				



## DIMENSIONS AND WEIGHT



MODEL		PORTS		DIMENSIONS mm										kg	
Single-phase	Three-phase	DN1	DN2	a	f	h	h1	h2	h3	n	n1	w	s	1~	3~
AL-RED 135m	AL-RED 135	1¼"	1"	31	296	206	97	103	200	186	135	73.5	10	<b>9.1</b>	<b>9.0</b>

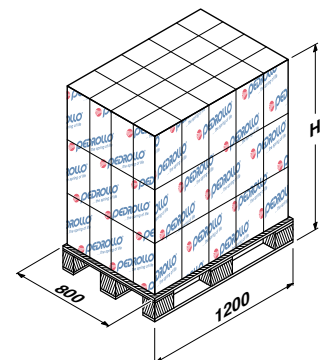
## ABSORPTION

MODEL	VOLTAGE (single-phase)		
Single-phase	230 V	240 V	110 V
AL-RED 135m	<b>5.0 A</b>	<b>4.8 A</b>	<b>10.0 A</b>

MODEL	VOLTAGE (three-phase)					
Three-phase	230 V	400 V	690 V	240 V	415 V	720 V
AL-RED 135	<b>3.1 A</b>	<b>1.8 A</b>	<b>1.0 A</b>	<b>3.0 A</b>	<b>1.7 A</b>	<b>1.0 A</b>

## PALLETIZATION

MODEL		GROUPAGE				CONTAINER			
Single-phase	Three-phase	n° pumps	H (mm)	kg		n° pumps	H (mm)	kg	
				1~	3~			1~	3~
AL-RED 135m	AL-RED 135	<b>70</b>	1450	661	654	<b>112</b>	2240	1043	1032



## **REGULATION (EU) N. 547/2012**

- Minimum efficiency index  $MEI \geq 0,10$  for water pumps according to the (EU) Regulation current from the 1th of January 2013.
- The benchmark for most efficient water pumps is  $MEI \geq 0,70$ .
- The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- Information on benchmark efficiency is available [www.europump.org/efficiencycharts](http://www.europump.org/efficiencycharts).